

**Industry:**  
Hardware/Software

**Organization:**  
Taliant Software

**Description:**  
Based in Denver, Colorado, Taliant Software delivers high quality application software and customer service to the insurance industry. Taliant's popular PowerComp® Insurance Suite is an object-based software package designed to help the entire insurance market – including underwriters, policy auditors, claims managers, medical reviewers and more – better manage their business.

**Business Problem:**  
Taliant Software wanted to increase their development capacity to handle more customers without sacrificing quality; they needed a proven development process and effective tools to support it.

**Solution:**  
Rational RequisitePro  
Rational TeamTest  
Rational Unified Process  
Rational Rose

**Key Benefits:**  
Cut the duration of project life cycles in half

Fostered a less frantic and chaotic development environment, with shorter work weeks and less overtime

Delivered higher quality software in less time while reducing costs

Improved team communication by adopting a common language for visual modeling

Increased ability to recruit and retain talented developers

Increased customer satisfaction by managing requirements to ensure delivered products fully meet customer needs

**Rational**® software

## Taliant Software: Delivering More Than Promised with Rational Unified Process, Rational Rose, Rational RequisitePro, and Rational TeamTest

Based in Denver, Colorado, Taliant Software delivers high quality application software and customer service to the insurance industry. Taliant's popular PowerComp® Insurance Suite is an object-based software package designed to help the entire insurance market – including underwriters, policy auditors, claims managers, medical reviewers and more – better manage their business. Underlying Taliant's success is a concentrated team effort to deliver more than promised and exceed expectations. With the help of the Rational Unified Process® (RUP) and Rational development tools — including Rational® Rose®, Rational® RequisitePro® and Rational® TeamTest — the Taliant development team is doing just that.

James Thomson, Vice President of Product Development at Taliant, explains, "With the Rational Unified Process and Rational tools, we've seen our ability to achieve our objectives accelerated. Our goal is to deliver more than promised; that's not only to our customers, but also to our employees and across the board. By adopting the Rational Unified Process, we've accelerated down that path." The Rational Unified Process is an industry-wide process platform incorporating best practices of software engineering. Taliant's development team has adopted each of these best practices with great success: using RUP's iterative development approach, they manage requirements with Rational RequisitePro, visually model their component-based architecture with Rational Rose, and continuously verify quality with Rational TeamTest.

### A Need to Grow

Most of Taliant's customers have unique needs that require customized software. Today, the PowerComp Insurance Suite helps meet those needs with relative ease. Before Taliant began using Rational tools, however, it was not always so easy. Thomson remembers, "In the past we used a rapid prototyping approach, which does not deliver a quality system, nor

a cohesive design at the end of the day. Quality is very important to us, and it just took too long to get the quality that we needed built into the product. If we expected to grow the company, then we needed to be able to have a higher capacity – to be able to handle more customers. The main issue was the software development process; we didn't feel that how we developed software was where we needed it to be. It wasn't going to deliver the quality that we wanted; it wasn't going to deliver the product that we were after. And that, in turn, would not deliver the level of service and quality of product we wanted to give to our customers."

Thomson continues, "We had decided to look at some different methodologies and toolsets. In our opinion, Rational is the leader in those areas. We wanted to align ourselves with a leader in the field, one that had credibility and some big names behind it, because from a small-company perspective, that would lend credibility to us. So Rational's leadership was also a key part of our decision-making process."

### Better Communication, Lower Costs and Higher Quality with Rational Rose

As a first step, Taliant developers began using Rational Rose, the award-winning model-driven development tool. "We believe that one of the key issues relative to developing good quality software is designing it and visually modeling it. So when we started using Rose initially, it was to address design and quality issues, to make sure we were measuring twice and cutting once," Thomson says.

Prior to using Rational Rose, Taliant lacked an effective way to communicate, evaluate and maintain their architectures. Thomson recalls, "Before we had implemented Rational Rose, almost all the details of design and how



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—James Thomson,  
Vice President of  
Product Development

requirements were related to that design were communicated informally through white board sessions, e-mails, or impromptu conversations. That hurt us a lot, because we did not have a well-documented system with regards to its design. The design itself was relatively good, but we did not have a mechanism to empirically look at it, evaluate it and verify that what was built was in fact what was designed."

Rational Rose uses the industry-standard Unified Modeling Language (UML) to specify, visualize, construct, and document the artifacts of software systems. Thomson believes that the UML has helped increase developer creativity, shorten the learning curve for new team members, and improve communication – not only internally but also with customers. "With Rational Rose, we can focus our developers' creativity and their abilities into what we need them to do – and we keep it within the process. Using Rose, they are empowered to design. They're speaking a common language through UML that can be taught and understood very quickly. So we can bring in someone that was a developer to begin with and very quickly have them starting to use Rose, learning to be a designer/developer and then, mature into full-blown architects. Because of the effectiveness of the UML as a communication tool, once other people know the UML, then we can communicate in a language that they're going to understand. And if I teach my clients the UML, then I can communicate with them in a language that they will understand as well. So Rational Rose really represented an opportunity for us to design a good system, fully document that system, and communicate that design to our clients so that they in turn can maintain the system and the designs that that system was put together with. With the UML, we're able to communicate in an objective manner that allows developers, designers and QA to collaborate effectively to make sure that the product that we're building implements the requirements as defined. And it allows us to verify that the product is sound."

Although those benefits are substantial, Thomson feels that the most important benefit of Rational Rose is its impact on the bottom line. With Rational Rose, Taliant is able to identify and correct potential problems earlier in the life cycle when they are easier and much less costly to fix. As a result, Taliant is

delivering higher quality software, in less time while reducing costs. Thomson explains, "We are using Rational Rose right now to perform a lot of our requirements analysis, building analysis models, transitioning those to design models, and in turn transitioning those to our deployment models. Our ability to work out problems with design early on in the process is the single biggest benefit that we've received. Prior to any developer starting to develop feature sets, we're able to fully evaluate the design ahead of time and work out a lot of the issues before the code is written. We're finding issues early on and we're able to solve them. And that means money savings for our clients and also substantial savings for us. We're able to deliver the software faster because we're finding problems earlier on and that just translates to money savings across the board."

### **Project Management, Simplified**

As Vice President of Product Development, Thomson must focus on project management as well as the company's business goals. He reports that the Rational Unified Process has had a tremendous positive impact in both areas, "In the project management role, the Rational Unified Process has been a real benefit. It put a framework around how we want to do things, so we didn't have to start from scratch. It has helped us by ensuring we do the right things at the right time, and get the right people involved when we need to. It has also made us think about best practices: How can we build quality in earlier on? What are the key artifacts we need to worry about? It's really forced us to formalize our process, and in a way that it is not prohibitively formalized. We've introduced the right level of formality, which has directly resulted in a number of different benefits. The first is more efficiency in our development, getting things right the first time. Plus, we have better software quality introduced earlier on, which was a key objective. And better quality of life for our developers, designers and testers; that's a critical piece for me and for them. When you look at that, the benefit of that is our ability to recruit the best people and have them stick around."

## Improving Quality of Life

"Better quality of life for our developers" is not frequently listed among the benefits for a software development process and supporting tools. Yet for Thomson and his team, the Taliant developers' quality of life is an important part of their success as individuals and as a company. The adoption of the Rational Unified Process and Rational tools has fostered a far less frantic and chaotic development environment. That, in turn, has led to shorter work weeks for developers and less overtime work in general.

Thomson explains, "Rational has enabled us to achieve a balance between work and life – you can actually work in the IT industry and have a life outside of IT. I think in many companies, whether it's a software development company or a company that has an IT department that's out of control, you don't find that very often. There are some people that are stars that can pump out twenty times what everyone else can. But those are the people that burn out in three years, and then their company is left scrambling to figure out the next person that they're going to burn out. We knew we could do better than that, and that that situation was not something we were prepared to live with."

He continues, "As a result, we're getting more work done than we ever have before. We have better quality, earlier. We have full documentation, which identifies what our product is and what it does. We have all of that and we're increasing our capacity without adding a whole bunch of extra bodies, while lowering the overtime. So it has really resulted in a fascinating culmination of things. By introducing the Rational Unified Process and some formality we can do all of those things, and do it better and more efficiently while reducing the amount of time that people have to spend doing them."

## Building A Quality Organization

Not only did Taliant realize these advantages sooner than expected, but they also have found that these benefits are recurring and that they build with each cycle. "We've been able to accomplish this a lot faster than we thought we could. And the net result is that we have an organization of people who know

what to do and when; they understand their contribution. They feel empowered. They understand that they're being successful and can see the direct results of that. Our employees feel like they're at the peak of their game, because we've given them an environment to do that.

That then translates into better recruitment because, those people want to bring in other people into this environment. They say, 'This is great. This is where you should work if you want to be in IT'. For example, we've recruited some of the best architects you can find and they are coming here and saying, 'This is the best company I've worked for.' In turn they are recruiting other people, so the whole quality of the organization goes up, we increase our capacity, and the whole cycle repeats itself. These are the things that somebody sitting in a chaotic environment could never consider. They don't see the forest through the trees; to understand that if I implement this process, these are the benefits that I'm going to see long term," notes Thomson.

## Effective Requirements Management is Crucial

Most of Taliant's customers require some customization of Taliant's core software components. As a result, gathering, defining and managing each customer's unique requirements is vital to a project's success. Taliant's designers and analysts use Rational RequisitePro for effective, integrated requirements management. Thomson notes, "If there's a single thing in the whole life cycle that will determine whether a project will be successful or not, it is requirements management. Requirements management to us is absolutely critical. Using Rational RequisitePro, we're able to track requirements, control them and implement traceability from those requirements into the associated areas of the system that implement them, through to test cases and test scripts. Rational RequisitePro has helped unify our team because it allows us to keep a central repository of requirements that we know is accurate and up to date. And because the requirements are in Microsoft Word® format, we have a natural mechanism – native documents – to go to for the requirements of our system. The Rational RequisitePro Web interface has proven invaluable too, because it

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allows our clients to easily access their requirements and what's been written and allows a really easy form of collaboration among all the stakeholders involved in the project."

Ultimately, the benefits of Rational RequisitePro for Taliant include not just effective requirements management but also increased customer satisfaction. Thomson adds, "Now that we've implemented Rational RequisitePro we've seen our resources utilized more effectively. There are less people actually involved in the requirements management process and people can focus better on the requirements at any point in time. Rational RequisitePro gives us a competitive edge because at the end of the day we can deliver to a product that is going to completely meet the requirements that our customer has outlined for us."

### **Automated Regression Testing with Rational TeamTest**

Because software quality is a key component of Taliant's success, ensuring quality with thorough testing is an integrated part of the entire development process. Taliant's testers rely on Rational TeamTest to automate functional regression testing. Rational TeamTest includes Rational® Robot and Rational® TestManager. Taliant's QA team uses Rational Robot's industry-leading functional testing technology, Object-Testing® to record, develop and playback resilient and highly effective test scripts. And they use Rational TestManager, a powerful, open and extensible environment to manage testing activities and resources. Through integration between Rational TestManager and Rational RequisitePro, Taliant's project requirements can be linked to the test cases used to validate them. This traceability ensures that each requirement is tested fully before the software is released, even if requirements evolve during the project. It also saves testers a lot of time. Plus, when a requirement changes,

all its related test cases are automatically flagged for the tester. This eliminates the need to spend hours trying to locate all the related tests, saving saving testers time and effort.

Thomson explains, "Once our requirements have been defined in Rational RequisitePro we start to develop test cases and our traceabilities. Our designers and testers get started at almost the same time. If a brand-new use case is introduced, then a test case is developed for that use case and a test script is developed. And if a given use case changes, then a test case is modified to accommodate that. We can record our test scripts with Rational Robot, so that we have a regression script set up immediately."

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### **Accelerating Implementation with Rational Services**

When Taliant was just starting to use Rational Rose, Rational RequisitePro and the Rational Unified Process, many on the development team attended training courses at Rational University to get a running start on working with the new process and using the tools. Thomson remembers, "When we were rolling things out, the Rational University courses helped us on a project fairly quickly. Our experiences with the Rational University training have been outstanding. When we adopted the Rational tool set and process, the biggest challenge that we had in using them was

getting our people trained to implement them. We went through all of the Rational courses dealing with requirements management, modeling, object-oriented design, quality assurance, the Rational Unified Process itself, using Rational RequisitePro, and using Rational Rose. All of the instructors were incredibly knowledgeable. They could add to the course material with their real world experience to make sure that we weren't just speaking in academic terms. They gave us the confidence and the grounding to actually take the tool sets and the process and have a starting point as to how to implement them." In addition to the courses, Taliant had Rational consultants work with them in the early stages of deployment. "Our consultant helped us out on a number of different occasions, to just kind of guide us in a few different places early on. The consultants were incredibly helpful in that way."

After the team was comfortable with the tools and Rational Unified Process, they resolved any problems that they encountered by either figuring them out by themselves, or with help from Rational's Technical Support. "I think the tech support we've gotten has been very responsive. It's been really good, and we've been happy with it. When we've had issues we've typically seen turn around time within 24 hours. When they didn't know the answer immediately they found someone that did and they proactively sent us documents or fixes or whatever we needed. Even if we could have found it ourselves, they found it for us and sent it to us. All the recommendations that Technical Support made have worked and that's made our roll-out of the tool sets and any issues that we've had a lot easier than I expected it to be," Thomson says. And more recently, Taliant has been taking advantage of the opportunities and experiences offered by Rational User Conferences. Thomson adds, "I think a lot of people found the Rational User Conference very useful, especially on the project management side."

### **Making "Deliver More Than Promised" a Reality**

The current release of Taliant's PowerComp software is based on a PowerBuilder® front-end and an Oracle® back-end. The team is already building the next generation of Taliant's product line with Java and J2EE, and Thomson expects even greater benefits from the Rational Unified Process and Rational tools in that environment. Looking back, Thomson sees the tremendous gains that Taliant has made, but he also believes that there is always room for improvement. "I think the most impressive thing about our experience is what Rational has done to help a small company like ours meet and exceed its goals. We're on a growth path right now. When we started, we had a five-year plan laid out. We're working on year three of that plan, but it's only year two. We've taken project life cycles that would have been two to two and a half years, and cut that in half. And I think the good news for us is that we're still on a path to continue reducing that cycle time."

He continues, "We've never had a failed project. Our primary purpose was to make the entire process less painful for our customers, and ourselves and to help ensure that we delivered on time on budget. In all honesty, I think we've done a good job of achieving those goals. We're not where we want to be yet, but with the Rational Unified Process and Rational tools, we're so much better off than where we were before. For me, that's the part that we need to celebrate as a company."

According to Thomson, it all goes back to Taliant's unofficial mission to give their customers more than they expect. He concludes, "We're either delivering what we promise, or delivering more than promised, and that's our key tenet. That's what everyone rallies around. It's a simple principle and a simple phrase, but it's something that we have adopted at the center of our culture. With Rational, it's not a pipe dream. We can see it, and we know it's a reality."

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## About Rational

Rational provides a software development platform that improves the speed, quality, and predictability of software projects. This integrated, full life-cycle solution combines software engineering best practices, market-leading tools, and professional services. Ninety-six of the Fortune 100 rely on Rational tools and services to build better software, faster. This open platform is extended by partners who provide more than 500 complementary products and services.

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